

Article 34

CLAIMS

1. A building panel including a metal sheet substrate and a paper covering, bonded to said substrate, wherein said paper covered metal sheet forms a major surface of the panel and wherein said metal sheet includes opposite edges which are shaped to form edge regions of the panel, each edge region being formed to include a connecting element which extends along that edge region and which allows for interconnection of the panel with a like panel, one connecting element being formed as a channel and the other formed as a projection, the projection of one edge region being configured to interfit within the channel of the other edge region of a like panel to form a load bearing region capable of accommodating loading applied to said interconnected panels, and wherein when interconnected, the major surfaces of the interconnected panels are aligned and generally in abutting relationship to form a substantially continuous exposed surface.
2. A building panel according to claim 1, further including a generally planar abutment surface at each longitudinal edge region, the abutment surface extending generally perpendicular to said major surface and wherein the connecting elements are disposed inwardly of the major surface with said abutment surfaces being disposed between the major surface and the said connecting elements, wherein the paper covering gives the panel a surface characteristic which is substantially the same as a plasterboard panel and wherein, in use, the panel is operative to form a substantially continuous exposed surface by connection of the panel with a like panel through interfitting of respective ones of the connecting elements, or by abutment of an edge of a plasterboard panel against a respective one of said abutment surfaces.
3. A building panel according to either claim 1 or 2, wherein said channel is generally C shaped in cross section incorporating opposite walls interconnected by a substantially flat base portion.
4. A building panel according to claim 3, wherein the opposite walls of the channel merge with its base portion at approximately 90° to form a part box section.
5. A building panel according to any preceding claim, wherein the projection is also in the form of a channel and interfits in nesting engagement within the channel of the like panel.

claim 1

6. A building panel according to ~~any preceding claim~~, wherein the projection has an outer surface which is complimentary to the inner surface of the channel so that on interconnection of the panels, the projection is in engagement with substantially all of the inner surface of the channel of the like panel. (fig. 4)

7. A building panel according to ~~any preceding claim~~, wherein the projection is operative to interfit with a channel of the like panel in a snap fit arrangement. (fig. 3)

8. A building panel according to claim 7, wherein the channel includes a re-entrant portion on its inner surface, and wherein the projection includes a crest portion on its outer surface and wherein the crest portion on the projection of one panel is arranged to engage with the re-entrant portion of the channel of a like panel in a snap fit arrangement. (fig. 3)

9. A building panel according to ~~any preceding claim~~, wherein the major surface incorporates a recess adjacent its edge regions to facilitate concealment of the join between the panel and a like panel. Claim 1

10. A building panel according to ~~any preceding claim~~, wherein said paper is bonded to said substrate using a reactive hot melt adhesive. (Col. 1, lines 55-61)

11. A building panel according to ~~any preceding claim~~, wherein said paper is bonded directly onto said metal substrate. (Col. 6, lines 30-32)

12. A building panel according to ~~any preceding claim~~, wherein the panel is formed in continuous lengths using a laminating process to adhere the paper covering to said metal substrate. (Col. 4, lines 27-34) (Col. 6, lines 46-48)

13. A laminated building panel including a paper covering bonded directly onto a metal substrate using a hot melt reactive adhesive. Claim 1

14. A building panel according to ~~any preceding claim~~, wherein the metal substrate is selected from the group comprising:  
mild steel, aluminium, tin, stainless steel, galvanised steel. (Col. 6, lines 33-35) teaches materials used different

15. A building panel according to ~~any preceding claim~~, wherein the gauge of the metal substrate is between 0.3 to 1 mm. (Col. 7, lines 27-28)

16. A composite panel including spaced sheet metal structures which are interconnected by a core, and wherein at least one of the sheet structures includes a building panel according to ~~any preceding claim~~ having the paper covering forming a major surface of said composite panel. (3, 8) (fig. 3) Claim 1

17. A composite panel according to claim 16, wherein both sheet structures include a building panel according to <sup>claim 1</sup> ~~any preceding claim~~ so that the paper covering forms both major surfaces of said composite panel.

18. A composite panel according to claim 17 ~~when dependent on claim 1~~, wherein each edge region of the panel includes a pair of said connecting elements, the connecting elements of each pair being associated with respective ones of the metal sheet structures, the connecting elements being in the form of interfitting channels and projections with each connecting element in the pair of one edge region being operative to interconnect with an associated one of the pair of connecting elements of the other edge region of a like panel to form a pair of interfitting projections and channels which allow the panel to interconnect to a like panel and which forms a load bearing region capable of accommodating loading applied to said interconnected panels, and wherein when interconnected, the major surfaces of the interconnected panels are aligned and generally in abutting relationship to form opposite substantially continuous exposed surfaces.

19. A building system including a building panel and a reinforcing element, the building panel having spaced metal sheets interconnected by a core, said metal sheets defining opposite major surfaces of said panel, each of said metal sheets including opposite edge regions which form longitudinal edge regions of the panel, wherein at least one of the edge regions of the metal sheets on both opposite edge regions of the panel is profiled to form connecting elements, the connecting elements of the longitudinal edge regions of the panel being adapted to interfit with the connecting element of a respective one of the longitudinal edge regions of a like panel, the panel being configured such that the major surfaces of the interconnected panels are aligned and in substantially abutting relationship to form a substantially continuous surface and wherein the reinforcing element is operative to be installed at the join formed on connection of the panel with a like panel and is secured in place by locating between the interfitting connecting elements to form a concealed reinforcing member which is operative to improve the load bearing characteristics of the interconnected panels.

20. A building system according to claim 17, wherein the edge region of each of the metal sheets of the building panel is profiled to form a said connecting element, and wherein in use, the reinforcing element locates between each pair of

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B16

112  
102 ①

improperly  
depending

NC

(17) number?

(13, 14)

(15)

(Fig. 1)

(Fig. 1)

Cancelled

interfitting connecting elements at the join between the interconnected panels to thereby interconnect the opposite metal sheets of each of the connected panels.

*a* 21. A building system according to ~~any one of claims 19 or 20~~, wherein the connecting elements are in the form of interfitting channels and projections, the or each channel incorporating opposite walls interconnected by a substantially flat base portion, and wherein the or each projection is shaped to interfit with the channel of a like panel and includes opposite walls interconnected by a substantially flat apical portion, and wherein said reinforcing element includes at least one engagement part which is generally U-shaped and locates between a said interfitting channel and projection of the interconnected panels. *(in the area of # 26)*

*a* 22. A building system according to claim 21 ~~when dependent on claim 20~~, wherein the reinforcing element includes spaced apart engagement parts interconnected by a web. *(17)*

*a* 23. A building system according to either claim 21 ~~or 22~~, wherein the opposite walls of each channel merges with its base portion at approximately 90° to form a part box section. *(see a.H. fig. 2)*

*a* 24. A building system according to ~~any one of claims 21 to 23~~, wherein the opposite walls of each projection merge with its apical portion at approximately 90° to form a part box section.

*a* 25. A building system according to ~~any one of claims 21 to 24~~, wherein the opposite walls of the channel include a re-entrant inner surface, and wherein the opposite walls of the projection includes a crest on its outer surface and wherein the crest portion on the projection of one panel is arranged to engage with the re-entrant inner portion of the channel like panel in a snap fit arrangement.

*a* 26. A building system according to ~~any one of claims 19 to 25~~, wherein the connecting elements are adapted to interfit with the connecting elements of a like panel and with the reinforcing element in a snap fit arrangement.

*a* 27. A building system according to ~~any one of claims 19 to 26~~, wherein the building panel further includes at least one abutment surface at each longitudinal edge region, the abutment surfaces extending generally perpendicular to said major surfaces of said panel and wherein the or each abutment surface is disposed between a respective one of the major surfaces and the said connecting elements.

claim 19

a 103b E) 28. A building system according to ~~any one of claims 19 to 27~~, wherein at least one of said metal sheets of the building panel incorporates a paper covering along its major surface.

1 2  
103 5 29. A building system according to claim 28, wherein said paper is bonded to said metal sheet using a reactive hot melt adhesive.

a 103 1 2 30. A building system according to either claim 28 ~~or 29~~, wherein said paper is bonded directly onto said metal sheet.

a 103 31. A building system according to any one of claims 28 to ~~30~~, wherein the metal sheet incorporating the paper covering is formed in continuous lengths using a laminating process to adhere the paper covering to said metal sheet.

a claim obj. 32. A building panel when used in a building system according to ~~any one of claims 19 to 31~~. claim 19

a 103 33. A reinforcing element when used in a building system according to ~~any one of claims 19 to 31~~. claim 19

15 34. A building panel substantially as herein described with reference to the accompanying drawings.

35. A composite panel substantially as herein described with reference to the accompanying drawings.

20 36. A building system substantially as herein described with reference to the accompanying drawings.

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